

**REMARKS**

This Application has been carefully reviewed in light of the Office Action mailed March 28, 2003. Claims 1-62 are pending in the Application. The Examiner has rejected Claims 1-62. As discussed below, Applicant believes all claims to be allowable over the cited references. Therefore, Applicant respectfully requests reconsideration and full allowance of all pending claims.

**Section 102 Rejections**

The Examiner rejects Claims 1 and 32 under 35 U.S.C. §102(e) as being anticipated by *Gunmar* (U.S. Patent No. 5,293,640). Applicant respectfully disagrees with this rejection.

*Gunmar* discloses a method for planning radio cell design. (*Gunmar*, Abstract). The planning method is used to determine how base station locations are selected, which antennas will be used, and the required amount of radiated power. (*Gunmar*, Col. 3; Lines 67-69 through Col. 4; Lines 1-2). The planning method includes the steps of geographically estimating traffic demand, determining the acceptable cell coverage based on transmitted power and antenna arrangements, and conducting coverage and interference measurements for the cells. The planning method is an iterative process that uses an allocation algorithm operating in a random technique to generate different collections of channel allocations for the cells until a radio cell design is acceptable from the point of view of interference and blocking. (*Gunmar*, Abstract). The method also includes generating an exclusion matrix that contains information regarding how different base stations or mobile units can coexist with respect to the same channel or adjacent channels. (*Gunmar*, Col. 4; Lines 60-64).

Independent Claim 1 of the present application recites the following:

A system for allocating bandwidth in a wireless communications network, comprising:

a geo-location tool residing on a computer-readable medium, the geo-location tool operable to receive data for a wireless communications network including a plurality of geo-location areas and to estimate bandwidth parameters for a geo-location area based on the data; and

an allocation engine residing on the computer-readable medium, the allocation engine operable to allocate bandwidth in the geo-location area based on its bandwidth parameters.

Independent Claim 32 recites similar, although not identical, claim limitations.

**Claims 1 and 32 are Allowable over Gunmar**

The Examiner cites *Gunmar* as disclosing all of the elements of Claims 1 and 32 of the present application. (Office Action mailed March 28, 2003, citing *Gunmar* Col. 12; Lines 60-68 and Col. 13; Lines 4-7). However, the sections cited by the Examiner are merely the elements of *Gunmar's* sole independent method claim and the Examiner has not pointed to any structure in the *Gunmar* specification which accomplishes the method. Therefore, Applicant is unable to determine what structural elements of *Gunmar* the Examiner considers to anticipate the elements of the present system, as disclosed in Claim 1. Therefore, Applicant respectfully requests that the Examiner provide citations to the *Gunmar* structure that the Examiner believes anticipate Claims 1 and 32 of the present application.

However, even though the Examiner has not pointed out the specific structure of *Gunmar* that the Examiner believes anticipates Claims 1 and 32 of the present application, Applicant respectfully argues that *Gunmar* fails to anticipate all the limitations of Claims 1 and 32. For example, Claim 1 recites "a geo-location tool residing on a computer-readable medium, the geo-location tool operable to receive data for a wireless communications network including a plurality of geo-location areas and to estimate bandwidth parameters for a geo-location area based on the data." Claim 32 recites similar, although not identical elements. *Gunmar* states that "the first thing that has to be done in planning cells is to estimate how the traffic demand is geographically distributed." (*Gunmar*, Col. 3; Lines 47-48). Furthermore, the *Gunmar* method includes "planning the number of channels per cell which corresponds to the estimated traffic demand ..." (*Gunmar*, Col. 11; Lines 21-24). Assuming, arguendo, that the traffic demand and/or channels per cell of *Gunmar* equate to bandwidth parameters, *Gunmar* fails to disclose how traffic demand is estimated or what tools are used to accomplish the estimations, let alone that a geo-location tool is operable to estimate bandwidth parameters based on received data for a wireless communications network including a plurality of geo-location areas and that the geo-location tool is operable to estimate bandwidth parameters for a geo-location area based on the data, as recited in Claims 1 and, similarly, in Claim 32.

For at least this reason, Applicant respectfully requests reconsideration and allowance of Claims 1 and 32, as well as all claims that depend from those claims.

**Section 103 Rejections**

The Examiner rejects Claims 2-31 and 33-62 under 35 U.S.C. § 103(a) as being unpatentable over *Gunmar* in view of U.S. Patent 6,366,780 issued to *Obhan* ("Obhan").

*Obhan* discloses a system and method for managing subscriber load within a terrestrial cellular wireless communication system. (*Obhan*, Abstract). Subscriber spectrum usage is tracked in real-time. (*Obhan*, Col. 2; Lines 38-39). The system performs operations that manage the use of the available spectrum according to the operating goals of the system operator. (*Obhan*, Col. 2; Lines 44-46). The system divides a service area into corridors for which operating rules are generated. (*Obhan*, Col. 2; Lines 62-66). The operating rules relate to the manner in which the available spectrum in each corridor will be managed. (*Obhan*, Col. 2; Lines 66-67). The system may make alterations to the system loading according to the operating rules when resource requirements change. (*Obhan*, Col. 3; Lines 3-7). The system uses accurate knowledge of the subscriber mix in making promotional offers to discount subscribers inviting them to make calls. (*Obhan*, Col. 12; Lines 38-40). The system can adjust the spectrum usage load by incentivizing or de-incentivizing use of the spectrum by adjusting the cost associated with using various spectrums. (*Obhan*, Col. 6, Lines 42-67).

In order to establish a *prima facie* case of obviousness through a combination of references, there must be some suggestion or motivation, either in the references themselves or in the knowledge available to one skilled in the art, to modify a reference or combine multiple references. *See* M.P.E.P. § 2143. Applicants respectfully argue that neither *Gunmar* nor *Obhan* disclose such a suggestion or motivation. "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art suggests the desirability of the combination." M.P.E.P. § 2143.01. *Gunmar* and *Obhan* fail to teach such a desirability.

The combination of prior art references without any evidence of a suggestion, teaching, or motivation to combine results in taking the present invention as a blueprint for piecing together prior art to defeat patentability. *See In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1998). This is impermissible hindsight as the invention cannot be viewed with the

blueprint drawn by the inventor. *See Interconnect Planning Corp. v. Feil*, 744 F.2d 1132, 1138 (Fed. Cir. 1985). In the present Office Action, the Examiner is merely using the present invention as a blueprint to piece together elements of various references when these references fail to suggest or motivate any combination between them.

In rejecting the present claims as obvious over the prior art, the Examiner should present evidence that suggests or motivates the modification, as is required by Federal Circuit case law. *See e.g., In re Fritch*, 972 F.2d 1260, 1265 (Fed. Cir. 1992); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 297 (Fed. Cir. 1985). Evidence of teaching or suggestion of the combination of prior art references to achieve the claimed invention is "essential" to avoid hindsight. *In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988). In the present Office Action, the Examiner has merely stated that it would have been obvious to one skilled in the art at the time this invention was made to combine the elements disclosed in the cited references. However, the Examiner cites no language in the prior art that would suggest or motivate the combination of references. "Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence" of a suggestion or motivation to combine references. *Dembiczak*, 175 F.3d at 999.

However, assuming arguendo, that a person of skill in the art would be motivated to combine *Gunmar* and *Obhan*, both references fail to disclose many of the elements recited in Claims 2-31 and 33-62 of the present application.

**Claims 2-31 and 33-62 are Allowable over Gunmar in view of Obhan**

Regarding Claims 2 and 33, *Obhan* fails to disclose a geo-location tool that is operable to determine an allocation bandwidth for a geo-location area, as recited in Claim 2. Claim 33 recites similar, although not identical, elements. The Examiner cites the language of *Obhan*'s claim 1 as supporting this element (Office Action mailed 3/28/03, page 3; ¶ 2, citing *Obhan*, Col. 23; Lines 1-16). *Obhan* merely discloses a method comprising the step of "determining loading level thresholds" for each base station (*Obhan*, Col. 23; Lines 9-10), which is essentially determining a limit on how many users and what classes of users will be allowed to access the system at a given time for a given base station, based on the goals of the system operator, such as a certain amount of revenue generation. (*Obhan*, Col. 11; Lines 47-57). Determining the load that will be allowed on the system is not the same as determining

the amount of resources (i.e. bandwidth) that will be allocated to the system. However, even if the load level threshold equates to allocation bandwidth, in *Obhan* the system operator establishes the loading level thresholds, not a geo-location tool, as recited in Claims 2 and, similarly in Claim 33, of the present application.

Regarding Claims 4 and 35, *Obhan* fails to disclose that the bandwidth parameters comprise bandwidth interference contributions for the geo-location area. The language cited by the Examiner (Office Action mailed 3/28/03 citing *Obhan*, Col. 6; Lines 57-67) does not disclose that bandwidth parameters comprise bandwidth interference contributions for the geo-location area. The cited passage merely indicates that when spectrum use exceeds a preset threshold, use of the spectrum is de-incentivized by adjusting the cost of the usage to encourage price-sensitive users to discontinue use to free up spectrum resources. (*Obhan*, Col. 6; Lines 57-67).

Regarding Claims 7-9 and 38-40, *Obhan* fails to disclose a source map comprising sources of bit usage in the geo-location area. Once again, the Examiner cites language in *Obhan* claim 1 (Col. 26; Lines 1-16) as disclosing such a source map. However, a source map comprising sources of bit usage for a geo-location area is not disclosed anywhere in *Obhan*.

Regarding Claims 12 and 43, *Obhan* fails to disclose a subscriber usage profile indicating the probability of a subscriber engaging in a connection in a geo-location area. The language cited by the Examiner (Office Action mailed 3/28/03, page 7, ¶2, citing *Obhan*, Col. 2; Lines 40-45) does not disclose a subscriber usage profile indicating the probability of a subscriber entering into a connection in a geo-location area. The cited passage merely indicates that the *Obhan* system uses potential usage data to manage the use of the available spectrum according to the operating goals of the system's operator. (*Obhan*, Col. 2; Lines 40-45).

Regarding Claims 17, 21, 48, and 52, *Obhan* fails to disclose a current usage map comprising a peak rate for each active connection in a geo-location area. The language cited by the Examiner (Office Action mailed 3/28/03, page 9, ¶2 citing *Obhan*, Col. 6; Lines 41-49) merely discloses that the *Obhan* system tracks spectrum supply and demand in each

corridor and incentivizes use of underutilized spectrums. There is no discussion in *Obhan* of a current usage map comprising a peak rate for each active connection in a geo-location area.

Regarding Claims 28-30 and 59-61, *Obhan* fails to disclose an interference contribution map indicating the impact on resource usage of supporting various bandwidths at the geo-location area. The language cited by the Examiner (Office Action mailed 3/28/03 citing *Obhan*, Col. 6; Lines 57-67) does not disclose an interference contribution map, let alone an interference contribution map that indicates the impact on resource usage of supporting various bandwidths at a geo-location area. The cited passage merely indicates that when spectrum use exceeds a preset threshold, use of the spectrum is de-incentivized by adjusting the cost of the usage to encourage price-sensitive users to discontinue use to free up spectrum resources. (*Obhan*, Col. 6; Lines 57-67).

Regarding Claims 19, 23, 27, 50, 54, and 58, *Obhan* fails to disclose usage or demand maps comprising primary and neighboring server information for each active connection within a geo-location area. The language cited by the Examiner (Office Action mailed 3/28/03 citing *Obhan*, Col. 6; Lines 16-67) does not disclose usage or demand maps that comprise primary or neighboring server information. The cited passage merely indicates that the *Obhan* system contains an analytical engine that monitors spectrum demand and usage within the corridors and enforces the operating rules of each respective corridor. (*Obhan*, Col. 6; Lines 57-67).

Finally, with respect to Claims 31 and 62, *Obhan* fails to disclose an allocation engine operable to generate a bandwidth supply map indicating the available bandwidth at a geo-location area based on bandwidth allocation, a total bandwidth, and an interference contribution bandwidth for a geo-location area, as recited in Claim 31. Claim 62 recites similar, although not identical, elements. The language cited by the Examiner (Office Action mailed 3/28/03 citing *Obhan*, Col. 6; Lines 35-67) does not disclose a bandwidth supply map, let alone a bandwidth supply map indicating the available bandwidth at a geo-location area based on bandwidth allocation, a total bandwidth, and an interference bandwidth contribution for a geo-location area. The cited passage merely indicates that when spectrum use exceeds a preset threshold, use of the spectrum is de-incentivized by adjusting the cost of the usage to

encourage price-sensitive users to discontinue use to free up spectrum resources. (*Obhan*, Col. 6; Lines 57-67).

For at least these additional reasons, Applicant respectfully requests reconsideration and allowance of Claims 2, 4, 7-9, 12, 17, 19, 21, 23, 27-31, 33, 35, 38-40, 43, 48, 50, 52, 54, and 58-62.

**CONCLUSION**

Applicant has made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicant respectfully requests full allowance of all pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact Brian W. Oaks, Attorney for Applicant, at the Examiner's at (214) 953-6986.

Although no other fees are believed due, the Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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